

We Claim:

1. An image processing system for linking one or more pixel objects to selected data objects in a sequence of video frames, the image processing system comprising:

a video and pixel object capture system for enabling a frame of said sequence of video frames to be viewed and one or more pixel objects in said frame to be selected and captured; and

a video linking system for automatically tracking selected pixel objects in preceding and succeeding frames in said sequence of video frames, said video linking system generating one or more linked video files which identify the pixel objects by frame number and location within the file, providing one or more links to data for each pixel object.

2. The system as recited in claim 1, wherein said data content has a predetermined playback rate and said video linking system may sample said video content at a sample rate of less than said predetermined playback rate.

3. The system as recited in claim 2, wherein said sample rate may be three (3) frames per second.

4. The system as recited in claim 1, wherein said video linking system is configured to identify segment breaks in said video content.

5. The system as recited in claim 4, wherein said segment breaks are determined by determining the median average pixel values for a series of frames and comparing changes in the pixel values relative to the median average and indicating a segment break when the change in pixel values represents at least a predetermined change relative to the median average.

6. A method for tracking an object selected in a video frame defined by a centroid and color variables, the method comprising the steps of:

- (a) determining an initial color variable range for said selected object sampling first a predetermined pixel radius relative to the previous frame centroid;
- (b) locating pixels within said initial color variable range defining located pixels;
- (c) determining a second color variable range for said located pixels;
- (d) sampling a second predetermined pixel radius, larger than said first predetermined pixel radius;
- (e) locating pixels in said second color variable range;
- (f) calculating a third color range for said pixels located in step (e);
- (g) locating pixels in said third color range;
- (h) determining the centroid and coordinates of pixels located in step (g);
- (i) storing the centroid and coordinates determined in step (h); and
- (j) repeating steps (b) – (i) until all frames in the video sequence have been processed.